

Comparisons of Job Characteristics

Focus Occupation: [Biological Scientists, All Other \(19-1029\)](#)

Associated Occupation: [Microbiologists \(19-1022\)](#)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 99

Focus Occupation: Biological Scientists, All Other (19-1029)

Associated Occupation: Microbiologists (19-1022)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Biology	3.7	24.1	24.4	0	Current knowledge level may be sufficient
English Language	11.2	16.6	18.2	0	Current knowledge level may be sufficient
Chemistry	4.8	15.2	16.4	0	Current knowledge level may be sufficient
Medicine and Dentistry	3.7	10.7	8.3	<	Expanded education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 97

Focus Occupation: Biological Scientists, All Other (19-1029)

Associated Occupation: Microbiologists (19-1022)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Science	4.5	17.0	16.1	0	Current skill level may be sufficient
Reading Comprehension	10.7	15.5	18.5	>	Skill level is likely sufficient
Critical Thinking	10.8	15.0	15.7	0	Current skill level may be sufficient
Writing	9.2	14.8	16.2	0	Current skill level may be sufficient
Active Learning	8.7	14.7	15.0	0	Current skill level may be sufficient
Learning Strategies	7.2	12.2	12.2	0	Current skill level may be sufficient
Mathematics	6.2	11.0	12.6	>	Skill level is likely sufficient
Management of Personnel Resources	6.9	10.6	9.1	<	A higher skill level may be required
Systems Analysis	6.5	10.6	11.0	0	Current skill level may be sufficient
Systems Evaluation	6.4	9.9	10.5	0	Current skill level may be sufficient

Operations Analysis	5.0	8.8	5.2	<<	Extensive development of skills in this area may be required
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The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities		Similarity of Focus Occupation to Associated Occupation: 96			
Focus Occupation: Biological Scientists, All Other (19-1029) Associated Occupation: Microbiologists (19-1022)					
Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Inductive Reasoning	10.2	18.0	16.1	<	Some improvement in abilities may be required
Written Comprehension	11.0	16.5	18.5	>	Current ability level is likely sufficient
Problem Sensitivity	11.1	16.1	14.4	<	Some improvement in abilities may be required
Category Flexibility	9.0	16.0	13.2	<	Some improvement in abilities may be required
Deductive Reasoning	10.6	15.7	15.6	0	Current ability level may be sufficient
Written Expression	9.8	15.5	17.9	>	Current ability level is likely sufficient
Near Vision	11.1	15.0	13.9	0	Current ability level may be sufficient
Information Ordering	9.9	13.9	13.0	0	Current ability level may be sufficient
Flexibility of Closure	7.8	13.6	11.4	<	Some improvement in abilities may be required
Fluency of Ideas	7.6	12.8	12.6	0	Current ability level may be sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

There are no common work activities.

Tools and Technologies that Both Occupations Have in Common		Similarity of Focus Occupation to Associated Occupation: 85
Focus Occupation: Biological Scientists, All Other (19-1029) Associated Occupation: Microbiologists (19-1022)		
Tools and Technologies	Exclusivity	
Autoclave and sterilizer equipment and accessories	12	
Chemical evaluation instruments and supplies	10	
Chromatographic measuring instruments and accessories	16	
Clinical and diagnostic analyzers and accessories and supplies	18	
Computers	1	
Content authoring and editing software	1	
Data management and query software	1	
Electrochemical measuring instruments and accessories	9	
General laboratory glassware and plasticware and supplies	13	

Indicating and recording instruments	2
Industry specific software	1
Information exchange software	1
Laboratory baths	24
Laboratory centrifuges and accessories	13
Laboratory cooling equipment	25
Laboratory electron and solid state physics equipment	29
Laboratory electrophoresis and blotting system and supplies	26
Laboratory enclosures and accessories	17
Laboratory heating and drying equipment	13
Laboratory incubating equipment	20
Laboratory mixing and stirring and shaking equipment and supplies	19
Laboratory ovens and accessories	15
Laboratory pumps and tubing	23
Laboratory water purification equipment and supplies	29
Network applications software	1
Pipettes and liquid handling equipment and supplies	16
Safety apparel	4
Spectroscopic equipment	10
Test Tubes	26
Viewing and observing instruments and accessories	4
Vision protection and accessories	3
Weight measuring instruments	7

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.